THE JAPANESE BEETLE:

. . . how we fight it

PA-375

UNITED STATES DEPARTMENT OF AGRICULTURE

THE JAPANESE BEETLE

how we fight it

The Japanese beetle is a highly destructive plant pest. The grub destroys turf by feeding on the roots of the grass. The adult feeds on flowers, shrubbery, trees, fruits, and some other crops, such as corn.

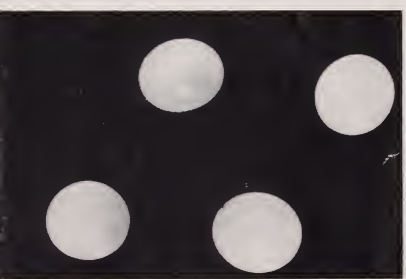
This insect was discovered in the United States in 1916. It has multiplied and spread until it now heavily infests areas in the Northeastern States and a growing number of scattered areas farther inland.

The beetle costs farmers and other residents of infested areas more than $10,000,000 annually in crop losses and control costs. An extensive Federal-State program has been organized to check its spread.

LIFE STAGES

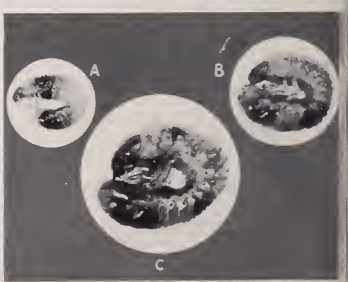
The Japanese beetle has a life span of 1 year. It spends only 1 month of this time above ground, and is active only in the daytime.

In early summer the female beetles deposit eggs—usually in turf, but sometimes in cultivated land. By midsummer the eggs hatch and the young grubs begin to eat roots of grass and other plants.



J-722

Eggs of the Japanese beetle. About 7 times natural size.

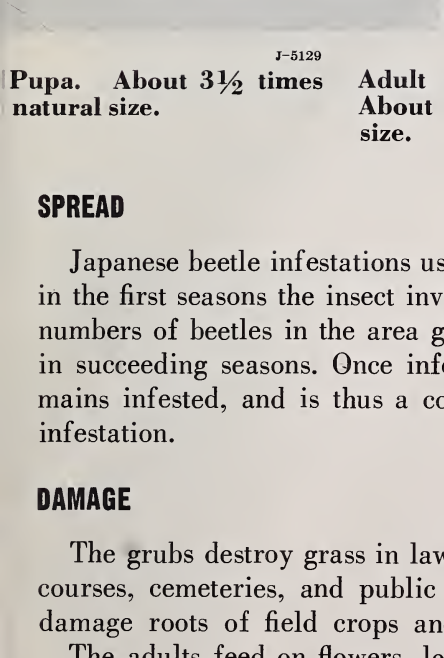


J-744

Grub in three stages of growth: *A*, midsummer; *B*, early autumn; *C*, late autumn and spring. About natural size.

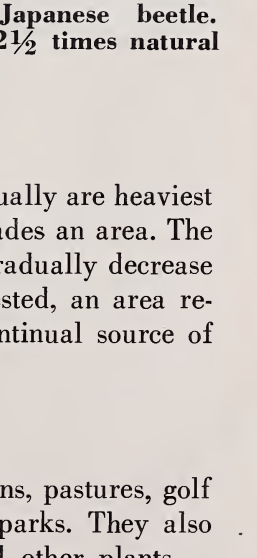
In late autumn the grubs burrow into the soil 4 to 8 inches and remain dormant all winter. In early spring they return to the turf, where they continue feeding on roots until late spring. Then they change into pupae.

In about 2 weeks the pupae become adult beetles, which emerge from the ground. An adult is about half an inch long. Its body is flattish, oval, and shiny. It is dark green and has 12 white spots along its edges. Wing cases are bronze colored. The adults spend their month of life flying in search of food, feeding, and breeding.



J-5129

Pupa. About 3½ times natural size.



BN-5089

Adult Japanese beetle. About 2½ times natural size.

SPREAD

Japanese beetle infestations usually are heaviest in the first seasons the insect invades an area. The numbers of beetles in the area gradually decrease in succeeding seasons. Once infested, an area remains infested, and is thus a continual source of infestation.

DAMAGE

The grubs destroy grass in lawns, pastures, golf courses, cemeteries, and public parks. They also damage roots of field crops and other plants.

The adults feed on flowers, leaves, and fruit of more than 200 varieties of plants. They skeletonize plant leaves, damage flowers, and eat the pulp of fruit.

Beetles can seriously injure corn by eating the silks. This prevents pollination and keeps kernels from forming. Yields may be seriously reduced.

J-2392

Turf damaged by grubs.

JB-1224

Beetles feeding on soybean leaves.

J-739

Beetles feeding on peaches.

J-732, J-1158

Beetle damage to corn. Left, beetles feeding on cornsilks. Right, resulting malformation of ears.

CONTROL MEASURES

You can help control the Japanese beetle.

Treat your turf and your plants with insecticide sprays or dusts. Consult your county agent or write to the U. S. Department of Agriculture, Washington 25, D. C., for specific recommendations on materials to use and methods of applying them.

Organize a community-wide campaign for treating soil with milky disease. Milky disease is a natural enemy of the Japanese beetle grub. It is available as a spore dust, and gives effective, long-

J-3699

Applying milky disease powder.

lasting control when applied on a community-wide basis. For further information about this type of treatment, consult your county agent or write to the U. S. Department of Agriculture.

Make your property unattractive to beetles. Remove all ripening and rotten fruit as soon as possible. Clean out host weeds and noneconomic or nonornamental plants. Keep plants and trees in healthy condition. When possible, select plants that do not attract beetles. Delay plantings to avoid the height of the beetle season.

Do not use beetle traps to protect plants. They may attract more beetles than they catch. Traps are primarily used by Federal-State authorities to obtain information about beetle incidence and spread.

Report new infestations to your county agent.

The Federal Government and the States are cooperating in a Japanese beetle regulatory, control, and research program. This program has three important aims:

- To inform the public about the pest.
- To conduct research for developing new control measures and improving those now in effect.
- To prevent further spread of beetles and grubs by establishing quarantines.

THE FEDERAL QUARANTINE

The Federal quarantine authorizes inspection and regulation of possible carriers of Japanese beetle grubs and adults.

Soil and plants with soil must be treated to destroy grubs before movement from infested areas. Products, containers, and transport equipment must be freed of adult beetles before movement to noninfested areas.

Permits to move regulated articles are issued by inspectors when the articles have not been exposed to infestation, or have been treated under an inspector's supervision, or have been declared free of infestation. Inspectors' addresses are available at post offices, county agents' offices, and at common carrier agencies.

Quarantine officials also supervise the treatment of transportation facilities, including aircraft, during periods of beetle flight, and the inspection and fumigation of soil and plant shipments out of regulated areas.

Residents and travelers in infested areas should become familiar with the quarantine regulations.

Do not carry or ship out of regulated areas infested plants, fruits, vegetables, soil, or sod.

If you vacation in or tour through regulated areas, take special care that adult beetles do not hitchhike out of the areas in your automobile or trailer.

Cooperate with officials at quarantine inspection points. The beetles or grubs they discover might otherwise infest your property and spread throughout your community.

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